



## Preventing *Culex pipiens* From Breeding Near Your Home

### • Eliminate standing water:

- Drill holes through or discard old tires
- Cap open fence posts
- Clear leaves and debris from rain gutters and downspouts
- Clear grass clippings and gravel from street gutters (especially after storms)
- Drain water from yard decorations
- Turn unused containers upside down. Wading pools, buckets, cans, barrels, scrap metal, and “yard junk” are *Culex pipiens*’ favorites.

### • Prevent standing water from becoming a breeding place:

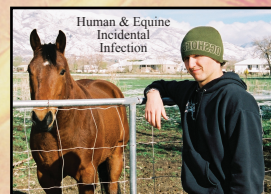
- Change birdbath water twice every week
- Change trough water or contact your local mosquito abatement district for products that can be used in potable water
- Pour excess water from potted plants weekly
- Stock your ornamental pool with mosquitofish. Call your local mosquito abatement and ask for mosquitofish (not available in all counties).

### • Examine the areas mentioned above after rain and watering.

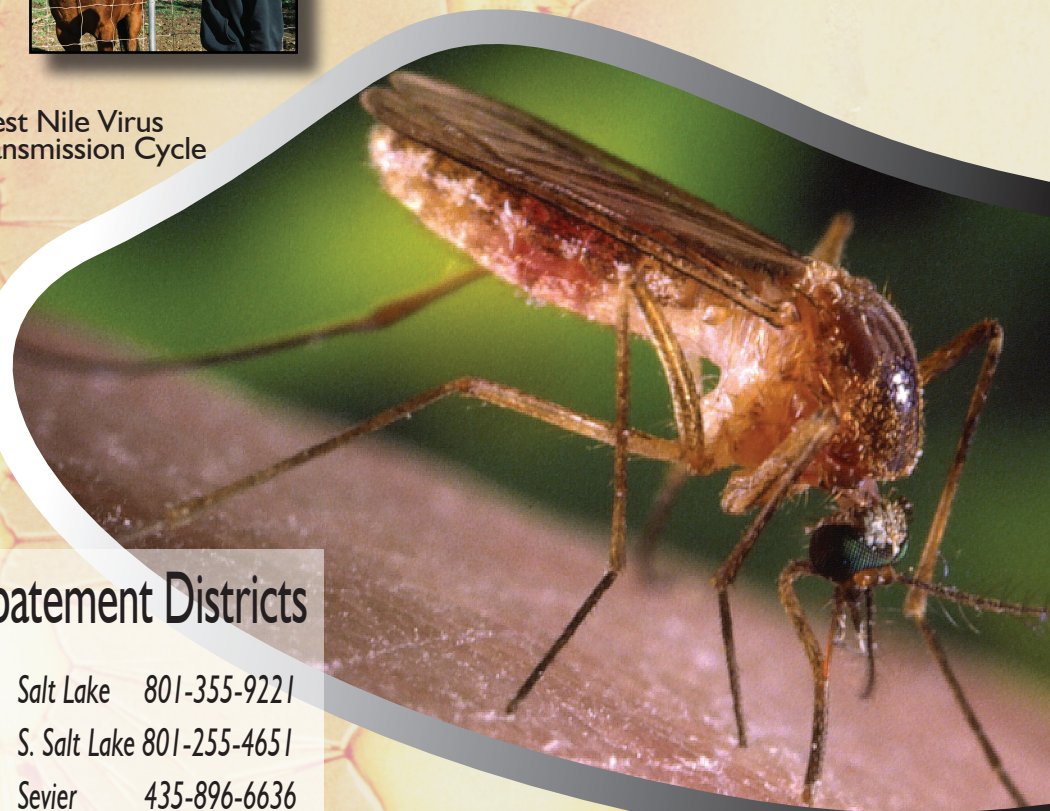
Remember, mosquitoes are tirelessly persistent. If there is standing water somewhere on your property, they will likely find it.



West Nile Virus Transmission Cycle



# Risk Prevention Control



## Utah Mosquito Abatement Districts

Box Elder	435-723-3700	Salt Lake	801-355-9221
Cache	435-753-3436	S. Salt Lake	801-255-4651
Carbon	435-636-3270	Sevier	435-896-6636
Davis	801-544-3736	Tooele	801-250-3879
Duchesne	435-722-3802	Uintah	435-789-4105
Emery	435-381-2933	Utah	801-370-8637
Logan	435-716-9763	Washington	435-652-5842
Magna	801-250-7765	Weber	801-392-1630
Moab	435-259-7161	W. Millard	435-864-4742
N. Summit	435-336-5624		

# West Nile Virus Utah



Utah's vast wetlands offer a spacious oasis for migrating birds. Unfortunately, these same wetlands provide a similar haven to mosquitoes, some of which



Raptors Serve as Reservoir Hosts for the West Nile Virus

will carry the West Nile Virus (WNV). The disease spreads when a mosquito bites an infected bird. The virus multiplies inside the mosquito, migrates to the mosquito's salivary glands, and is later transmitted to another animal during a subsequent bite. Most bird species will become carriers for the virus. Corvids (magpies, blue jays, crows, ravens) and

Raptors (hawks, falcons, eagles) will suffer serious effects. Report sick, dying, and dead Corvids and Raptors to the Division of Wildlife Resources at 801-538-4700. Mosquito control is the only reliable method of disrupting this disease cycle.

In humans, WNV can cause West Nile Encephalitis, an inflammation of the brain. Though rare, this encephalitis can be fatal. Often, those suffering from West Nile Virus infection report flu-like symptoms. Only a medical professional can diagnose WNV infection or encephalitis. Currently there is no human vaccine against WNV or any treatment for infected persons.

In horses, WNV can also cause severe and fatal reactions, the mortality rate being three times that of humans. Horse owners should contact their veterinarians about an available USDA approved vaccine. Please see the CDC website or your veterinarian for more information.

### What About My Pond?

Ornamental ponds are a major source for the WNV carrying house mosquito, *Culex pipiens*. Call your local mosquito abatement and ask for tiny, larvae-eating mosquitofish. There is no additional cost for this service.

*Not available in every county*



## The West Nile Virus and Utah

Though any number of Utah's fifty mosquito species could carry and transmit the West Nile Virus (WNV), the two most likely vectors (disease carriers) will be *Culex tarsalis* and *Culex pipiens*. Of these two mosquitoes, Utah's mosquito abatement districts (MADs) spend most of their time battling *Culex tarsalis* along the wetlands of the Great Salt Lake and other large bodies of permanent and semi-permanent water throughout the state. *Culex tarsalis* prefers biting birds during spring and large mammals (including humans) as the summer progresses, making it a particularly dangerous vector. *Culex tarsalis* bites only from dusk to dawn, never during daylight hours.

Combating Utah's other WNV vector, *Culex pipiens*, begins at your home. Commonly known as the house mosquito, *Culex pipiens* breeds in rain gutters, garbage cans, discarded tires, ornamental pools, etc. It likes "yard junk" just as much as it likes yard decorations, and sprinkler water as much as rain. It lives almost exclusively around houses, preferring to sneak inside, buzz about, and bite at night.



### Personal Protection

Avoiding mosquito bites is the best method available to avoid infection. And therefore, knowing mosquito habits is as critical as the kind of repellent you use. Avoid mosquito bites by staying indoors at dawn and dusk. Wear long pants, a long-sleeved shirt, and use a mosquito repellent with a 50% or less solution of DEET. 2-12 year olds should use a 10% DEET solution (avoiding their mouths, eyes, and hands). Visit the CDC website or talk with your doctor for information on applying DEET to infants.

*A higher percentage of DEET in a repellent protects longer (not more effectively) than a lower percentage. Only use an amount of DEET appropriate for your outdoor stay.*

## Mosquito Abatement in Utah

Utah's mosquito abatement districts (MADs) protect Utahns from mosquitoes in many ways. They conduct ongoing surveillance for the West Nile Virus (WNV) and several other mosquito-borne diseases such as St. Louis Encephalitis, Western Equine Encephalitis, and dog heartworm disease. MADs also educate the public about mosquitoes and public health.

MADs check weekly for virus antibodies in sentinel chicken flocks located across the state, and also use a variety of traps to collect and test mosquitoes. MADs work with local, state, and national health institutions to track human and equine mosquito-borne infections.

Fogging for adult mosquitoes, though very visible, actually comprises only one quarter of the MADs' work. They spend a majority of their time in scattered fields and wetlands, treating mosquito larvae before they fly as adults. MADs use a variety of vehicles and equipment, from specially equipped ATVs and boats, to tracked vehicles and airplanes.

If you have questions about the West Nile Virus, mosquitoes, or mosquito abatement in Utah, please call your local health department or your local mosquito abatement district (phone numbers are printed on the back of this brochure). Report dead birds to the Utah Division of Wildlife Resources at 801-538-4700.

For more information, please see the following web sites:

[www.ag.utah.gov](http://www.ag.utah.gov)  
[www.mosquito.org](http://www.mosquito.org)  
[www.health.utah.gov/wnv](http://www.health.utah.gov/wnv)  
[www.wildlife.utah.gov/wnv](http://www.wildlife.utah.gov/wnv)  
<http://environmentalrisk.cornell.edu/wnv>  
[www.cdc.gov/ncidod/dvbid/westnile/index.htm](http://www.cdc.gov/ncidod/dvbid/westnile/index.htm)  
[www.epa.gov/pesticides/factsheets/skeeters.htm](http://www.epa.gov/pesticides/factsheets/skeeters.htm)

